



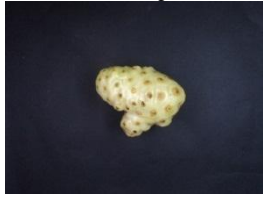






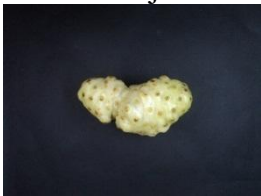










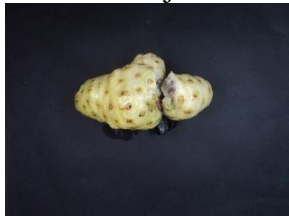

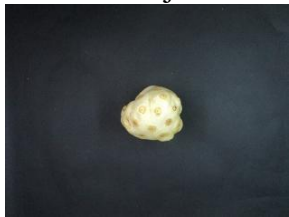

## LAMPIRAN 1


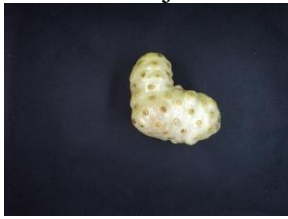




### DATA YANG DIGUNAKAN UNTUK PENELITIAN




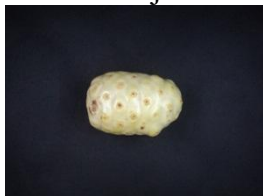


No	Nama Citra	EkstraksiCiri	NilaiCiri R	NilaiCiri G	NilaiCiri B
1	CitraUji1 	Ekstraksiwarna Perimeter Area Ik TS	0.2800 - - - TS	0.3127 - - - TS	0.4073 337 8441 0.9340 S
2	CitraUji2 	Ekstraksiwarna Perimeter Area Ik TS	0.2860 - - - TS	0.3063 - - - TS	0.4076 398 9525 0.7556 TS
3	CitraUji3 	Ekstraksiwarna Perimeter Area Ik TS	0.2823 - - - TS	0.3115 - - - TS	0.4061 395 9397 0.7568 TS
4	CitraUji4 	Ekstraksiwarna Perimeter Area Ik TS	0.2962 305 7635 1.0314 TS	0.3095 - - - TS	0.3942 323 7401 0.8914 S
5	CitraUji5 	Ekstraksiwarna Perimeter Area Ik TS	0.2978 305 7636 1.0315 TS	0.3095 - - - TS	0.3927 325 7379 0.8779 S
6	CitraUji6 	Ekstraksiwarna Perimeter Area Ik TS	0.2876 - - - TS	0.3082 - - - TS	0.4042 405 9055 0.6937 TS








7	CitraUji7 	Ekstraksiwarna Perimeter Area Ik TS	0.2872 - - - TS	0.3082 - - - TS	0.4047 411 9117 0.6782 TS
8	CitraUji8 	Ekstraksiwarna Perimeter Area Ik TS	0.2874 - - - TS	0.3082 - - - TS	0.4042 694 21488 0.5606 S
9	CitraUji9 	Ekstraksiwarna Perimeter Area Ik TS	0.2968 328 8326 0.9725 TS	0.3172 - - - TS	0.3860 353 7924 0.7991 S
10	CitraUji10 	Ekstraksiwarna Perimeter Area Ik TS	0.2968 329 8344 0.9687 TS	0.3178 - - - TS	0.3854 339 7931 0.8672 S
11	CitraUji11 	Ekstraksiwarna Perimeter Area Ik TS	0.2892 - - - TS	0.3126 - - - TS	0.3982 358 8389 0.8225 TS
12	CitraUji12 	Ekstraksiwarna Perimeter Area Ik TS	0.2926 - - - TS	0.3188 - - - TS	0.3885 349 8488 0.8757 TS








13	CitraUji13 	Ekstraksiwarna Perimeter Area Ik S	0.3036 212 4475 1.2512 S	0.3232 - - - TS	0.3732 211 4440 1.2532 S
14	CitraUji14 	Ekstraksiwarna Perimeter Area Ik S	0.3040 213 4482 1.2414 S	0.3229 - - - TS	0.3730 212 4437 1.2406 S
15	CitraUji15 	Ekstraksiwarna Perimeter Area Ik S	0.2997 207 4097 1.2015 S	0.3341 - - - TS	0.3662 210 4057 1.1560 S
16	CitraUji16 	Ekstraksiwarna Perimeter Area Ik TS	1.2015 - - - TS	0.3130 - - - TS	0.3961 424 10590 0.7402 S
17	CitraUji17 	Ekstraksiwarna Perimeter Area Ik TS	0.2901 - - - TS	0.3135 - - - TS	0.3964 418 10628 0.7644 S
18	CitraUji18 	Ekstraksiwarna Perimeter Area Ik TS	0.2760 - - - TS	0.3096 - - - TS	0.4143 327 7828 0.9200 TS

19	CitraUji19 	Ekstraksiwarna Perimeter Area Ik TS	0.2960 320 8493 1.0422 TS	0.3128 - - - TS	0.3912 349 8100 0.8357 TS
20	CitraUji20 	Ekstraksiwarna Perimeter Area Ik TS	0.2955 318 8473 1.0529 TS	0.3129 - - - TS	0.3915 339 8072 0.8827 TS
21	CitraUji21 	Ekstraksiwarna Perimeter Area Ik TS	0.2897 - - - TS	0.3383 - - - TS	0.3720 520 17341 0.8059 S
22	CitraUji22 	Ekstraksiwarna Perimeter Area Ik TS	0.2904 - - - TS	0.3376 - - - TS	0.3720 518 17377 0.8138 S
23	CitraUji23 	Ekstraksiwarna Perimeter Area Ik TS	0.2893 - - - TS	0.3188 - - - TS	0.3919 483 20700 1.1150 S
24	CitraUji24 	Ekstraksiwarna Perimeter Area Ik TS	0.2885 - - - TS	0.3184 - - - TS	0.3931 480 20688 1.1284 S

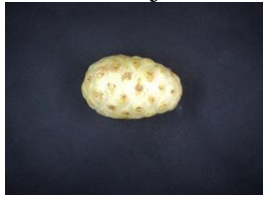





25	CitraUji25 	Ekstraksiwarna Perimeter Area Ik TS	0.3002 595 20217 0.7176 TS	0.3184 - - - TS	0.3749 595 19773 0.7019 S
26	CitraUji26 	Ekstraksiwarna Perimeter Area Ik TS	0.2731 - - - TS	0.3623 - - - TS	0.3646 578 18486 0.6953 S
27	CitraUji27 	Ekstraksiwarna Perimeter Area Ik TS	0.2853 - - - TS	0.3175 - - - TS	0.3973 339 8697 0.9510 S
28	CitraUji28 	Ekstraksiwarna Perimeter Area Ik TS	0.2855 - - - TS	0.3174 - - - TS	0.3971 339 8701 0.9514 S
29	CitraUji29 	Ekstraksiwarna Perimeter Area Ik TS	0.2843 - - - TS	0.3149 - - - TS	0.4008 353 8991 0.9067 S
30	CitraUji30 	Ekstraksiwarna Perimeter Area Ik TS	0.2833 - - - TS	0.3146 - - - TS	0.4021 352 8903 0.9029 S



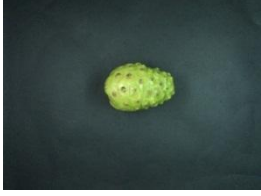



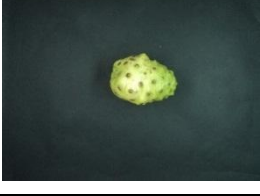
31	CitraUji31 	Ekstraksiwarna Perimeter Area Ik TS	0.2921 - - - TS	0.3199 - - - TS	0.3880 346 9159 0.9614 S
32	CitraUji32 	Ekstraksiwarna Perimeter Area Ik TS	0.2936 - - - TS	0.3189 - - - TS	0.3875 346 9148 0.9602 S
33	CitraUji33 	Ekstraksiwarna Perimeter Area Ik S	0.2972 324 8881 1.0631 S	0.3137 - - - TS	0.3891 328 8522 0.9954 S
34	CitraUji34 	Ekstraksiwarna Perimeter Area Ik S	0.2979 323 8881 1.0697 S	0.3124 - - - TS	0.3896 325 8530 1.0148 S
35	CitraUji35 	Ekstraksiwarna Perimeter Area Ik S	0.2979 315 8547 1.0824 S	0.3181 - - - TS	0.3840 316 8340 1.0495 S
36	CitraUji36 	Ekstraksiwarna Perimeter Area Ik S	0.2979 315 8550 1.0828 S	0.3182 - - - TS	0.3839 315 8316 1.0532 S



37	CitraUji37 	Ekstraksiwarna Perimeter Area Ik S	0.2994 324 8947 1.0710 S	0.3211 - - - TS	0.3795 330 8551 0.9867 S
38	CitraUji38 	Ekstraksiwarna Perimeter Area Ik S	0.2995 322 8944 1.0840 S	0.3205 - - - TS	0.3800 325 8528 1.0146 S
39	CitraUji39 	Ekstraksiwarna Perimeter Area Ik S	0.3029 320 8860 1.0873 S	0.3172 - - - TS	0.3799 313 8145 1.0447 S
40	CitraUji40 	Ekstraksiwarna Perimeter Area Ik S	0.3031 320 8902 1.0924 S	0.3165 - - - TS	0.3804 313 8164 1.0472 S
41	CitraUji41 	Ekstraksiwarna Perimeter Area Ik TS	0.2958 284 6631 1.0331 TS	0.3198 - - - TS	0.3843 295 6209 0.8966 TS
42	CitraUji42 	Ekstraksiwarna Perimeter Area Ik TS	0.2955 284 6629 1.0328 TS	0.3196 - - - TS	0.3849 295 6180 0.8924 TS
43	CitraUji43 	Ekstraksiwarna Perimeter Area Ik TS	0.2986 281 6413 1.0206 TS	0.3209 - - - TS	0.3806 278 6073 0.9875 TS

44	CitraUji44 	Ekstraksiwarna Perimeter Area Ik TS	0.2981 281 6411 1.0203 TS	0.3212 - - - TS	0.3807 279 6075 0.9807 TS
45	CitraUji45 	Ekstraksiwarna Perimeter Area Ik TS	0.2915 - - - TS	0.3189 - - - TS	0.3896 363 9940 0.9479 TS
46	CitraUji46 	Ekstraksiwarna Perimeter Area Ik TS	0.2735 - - - TS	0.3069 - - - TS	0.419 334 8244 0.9287 S
47	CitraUji47 	Ekstraksiwarna Perimeter Area Ik TS	0.3109 395 13710 1.1042 TS	0.3192 - - - TS	0.3698 444 12212 0.7784 TS
48	CitraUji48 	Ekstraksiwarna Perimeter Area Ik S	0.2970 329 9298 1.0795 S	0.3166 - - - TS	0.3864 337 8888 0.9835 S
49	CitraUji49 	Ekstraksiwarna Perimeter Area Ik TS	0.2928 - - - TS	0.3198 - - - TS	0.3874 362 10454 1.0025 TS
50	CitraUji50 	Ekstraksiwarna Perimeter Area Ik TS	0.2932 - - - TS	0.3197 - - - TS	0.3871 368 10485 0.9729 TS



51	CitraUji51 	Ekstraksiwarna Perimeter Area Ik S	0.2970 320 8874 1.0890 S	0.3154 - - - TS	0.3877 348 8196 0.8505 S
52	CitraUji52 	Ekstraksiwarna Perimeter Area Ik S	0.2970 324 9002 1.0776 S	0.3140 - - - TS	0.3890 337 8260 0.9140 S
53	CitraUji53 	Ekstraksiwarna Perimeter Area Ik S	0.2974 325 9047 1.0763 S	0.3140 - - - TS	0.3886 331 8273 0.9489 S
54	CitraUji54 	Ekstraksiwarna Perimeter Area Ik S	0.2783 - - - S	0.3702 - - - S	0.3516 - - - S
55	CitraUji55 	Ekstraksiwarna Perimeter Area Ik S	0.2782 - - - S	0.3706 1345 31500 0.2188 TS	0.3511 - - - S
56	CitraUji56 	Ekstraksiwarna Perimeter Area Ik S	0.2802 - - - S	0.3684 - - - S	0.3514 - - - S

57	CitraUji57 	Ekstraksiwarna Perimeter Area Ik	0.2823 - - - S	0.3649 - - - S	0.3528 - - - S
58	CitraUji58 	Ekstraksiwarna Perimeter Area Ik	0.2824 - - - S	0.3648 - - - S	0.3529 - - - S
59	CitraUji59 	Ekstraksiwarna Perimeter Area Ik	0.2824 - - - S	0.3655 - - - S	0.3557 - - - S
60	CitraUji60 	Ekstraksiwarna Perimeter Area Ik	0.2792 - - - S	0.3659 - - - S	0.3549 - - - S
61	CitraUji61 	Ekstraksiwarna Perimeter Area Ik	0.2785 - - - S	0.3651 - - - S	0.3565 - - - S
62	CitraUji62 	Ekstraksiwarna Perimeter Area Ik	0.2792 - - - S	0.3650 - - - S	0.3545 - - - S
63	CitraUji63 	Ekstraksiwarna Perimeter Area Ik	0.2797 - - - S	0.3658 - - - S	0.3502 - - - S

64	CitraUji64 	Ekstraksiwarna Perimeter Area Ik	0.2823 - - - S	0.3683 - - - S	0.3502 - - - S
65	CitraUji65 	Ekstraksiwarna Perimeter Area Ik	0.2969 320 8864 1.0878 S	0.3153 - - - TS	0.3878 349 8257 0.8519 S

**KETERANGAN:**










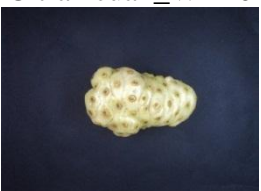
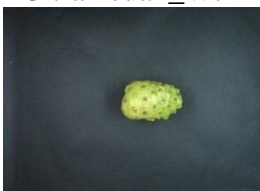




**S** : Sesuai






**TS** : TidakSesuai




**PERBANDINGAN HASIL PENGUJIAN**


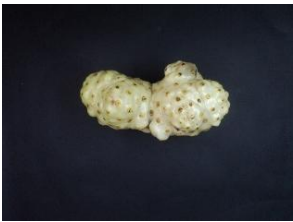

NO	Kanalwarna	JUMLAH		Akurasi (%)	
		Sesuai (S)	TidakSesuai(TS)	Sesuai (S)	TidakSesuai(TS)
1	RED	26	39	40	60
2	GREEN	10	55	15	85
3	BLUE	48	17	74	26

### DATA YANG DIGUNAKAN UNTUK DATABASE

<p>CitraAcuan_WB1</p>  <p>Nilaiwarna: 0.4197</p>	<p>CitraAcuan_WB2</p>  <p>NilaiWarna: 0.4139</p>	<p>CitraAcuan_WB3</p>  <p>NilaiWarna : 0.4118</p>
<p>CitraAcuan_WB4</p>  <p>Nilaiwarna : 0.4144</p>	<p>CitraAcuan_WB5</p>  <p>Nilaiwarna : 0.4179</p>	<p>CitraAcuan_WB6</p>  <p>Nilaiwarna : 0.4163</p>
<p>CitraAcuan_WB7</p>  <p>Nilaiwarna : 0.4128</p>	<p>CitraAcuan_WB8</p>  <p>Nilaiwarna :0.4031</p>	<p>CitraAcuan_WB9</p>  <p>Nilaiwarna : 0.4121</p>
<p>CitraAcuan_WB10</p>  <p>Nilaiwarna : 0.4116</p>	<p>CitraAcuan_WJ1</p>  <p>Nilaiwarna : 0.3603</p>	<p>CitraAcuan_WJ2</p>  <p>Nilaiwarna : 0.3508</p>
<p>CitraAcuan_WJ3</p>  <p>Nilaiwarna : 0.3521</p>	<p>CitraAcuan_WJ4</p>  <p>Nilaiwarna : 0.3539</p>	<p>CitraAcuan_WJ5</p>  <p>Nilaiwarna :0.3570</p>

CitraAcuan_WJ6  Nilaiwarna :0.3539	CitraAcuan_WJ7  Nilaiwarna :0.3573	CitraAcuan_WJ8  Nilaiwarna :0.3528
CitraAcuan_WJ9  Nilaiwarna :0.3561	CitraAcuan_WJ10  Nilaiwarna :0.3540	

No	Nama Citra	EkstraksiCiri	NilaiCiri
1	CitraAcuan_BB1 	Perimeter Area Ik	316 8335 1.0489
2	CitraAcuan_BB1 	Perimeter Area Ik	357 9348 0.9217
3	CitraAcuan_BB3 	Perimeter Area Ik	342 8911 0.9574

4	CitraAcuan_BJ1 	Perimeter Area Ik	390 9820 0.8113
5	CitraAcuan_BJ2 	Perimeter Area Ik	418 10628 0.7644
6	CitraAcuan_BJ3 	Perimeter Area Ik	390 9820 0.8113

## LAMPIRAN 2

### *SOURCE CODING MATLAB*

#### Program Utama

```
clc
clear all, close all
a1 = imread('CitraUji9.jpg');
a2 = im2double(a1);

%PemisahanWarna RGB
R = a2(:,:,1);
G = a2(:,:,2);
B = a2(:,:,3);

%Normalisasi RGB
b1=R+G+B;

r=R./b1;
g=G./b1;
b=B./b1;

% figure,
% subplot(221),imshow(a2),title('Citra RGB');
% subplot(222),imshow(b),title('Normalisasi B');

%Nilai Mean
meanB = mean2(b)

if meanB <= 0.3603
msgbox ('MengkuduMentah')
else
    BENTUK(B)
end
```

## Function Bentuk

```
function BENTUK (Citra)
%Enhancement
% -----
% # imadjust
%.....
e1=imadjust(Citra);

figure,
subplot(221),imshow(Citra),title('hasilcitrakanal blue');
subplot(222),imshow(e1),title('hasilimadjustkanal blue');

% # binerization
%.....
tb1=im2bw(e1);

figure,imshow(tb1),title('hasilcitrabinerimadjustkanal blue');

%Operasimorfologi
%.....
secl=strel('disk',5);
bwdilat=imdilate(tb1,secl);

figure,imshow(bwdilat),title('HasilMorfologibwdilat');

%Mencari Perimeter
A1 = strel('disk',1);
B1 = imerode(bwdilat,A1);
C = (bwdilat-B1);
D = sum(C);
E = sum(D);
perimeter = (E)
%Mencari Area
F = sum(bwdilat);
G = sum(F);
area = (G)

%MencariIndeksKebulatan
ik = 4*pi*area/perimeter^2;
ir = ik

%StandardisasiMengkuduBaik
p = perimeter;
a = area;
ir = ik;

pB1 = 316;
aB1 = 8335;
irB1 = 1.0489;

pB2 = 357;
aB2 = 9348;
irB2 = 0.9217;
```



```

pB3 = 342;
aB3 = 8911;
irB3 = 0.9574;

%StandardisasiMengkuduJelek
pJ1 = 421;
aJ1 = 11044;
irJ1 = 0.7830;

pJ2 = 418;
aJ2 = 10628;
irJ2 = 0.7644;

pJ3 = 390;
aJ3 = 9820;
irJ3 = 0.8113;

%PERHITUNGAN MENGGUNAKAN SQUARE EUCLIDEAN
MB1 = ((p-pB1)^2+(a-aB1)^2+(ir-irB1)^2);
MB2 = ((p-pB2)^2+(a-aB2)^2+(ir-irB2)^2);
MB3 = ((p-pB3)^2+(a-aB3)^2+(ir-irB3)^2);

MJ1 = ((p-pJ1)^2+(a-aJ1)^2+(ir-irJ1)^2);
MJ2 = ((p-pJ2)^2+(a-aJ2)^2+(ir-irJ2)^2);
MJ3 = ((p-pJ3)^2+(a-aJ3)^2+(ir-irJ3)^2);

fprintf('\n\tNilai MB1 = %13.4f\t',MB1);
fprintf('\n\tNilai MB2 = %13.4f\t',MB2);
fprintf('\n\tNilai MB3 = %13.4f\t',MB3);
fprintf('\n\tNilai MJ1 = %13.4f\t',MJ1);
fprintf('\n\tNilai MJ2 = %13.4f\t',MJ2);
fprintf('\n\tNilai MJ3 = %13.4f\n',MJ3);

% uji
A = min(MB1,MB2);
B = min(A,MB3);

C = min(MJ1,MJ2);
D = min(C,MJ3);

if D < B
msgbox('Mengkuduterdeteksimasaktapimemilikibentuk yang JELEK')
else
msgbox('Mengkuduterdeteksimasakdanmemilikibentuk yang BAIK')
end

```

### LAMPIRAN 3

## SOURCE CODE PERHITUNGAN SQUARE EUCLIDEAN

```
%PERHITUNGAN MENGGUNAKAN SQUARE EUCLIDEAN
MB1 = ((p-pB1)^2+(a-aB1)^2+(ir-irB1)^2);
MB2 = ((p-pB2)^2+(a-aB2)^2+(ir-irB2)^2);
MB3 = ((p-pB3)^2+(a-aB3)^2+(ir-irB3)^2);

MJ1 = ((p-pJ1)^2+(a-aJ1)^2+(ir-irJ1)^2);
MJ2 = ((p-pJ2)^2+(a-aJ2)^2+(ir-irJ2)^2);
MJ3 = ((p-pJ3)^2+(a-aJ3)^2+(ir-irJ3)^2);
```